

Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-2 (canceled).

3. (previously presented) A method for individualizing a hearing aid in adaptation to a loudness perception of an individual, said method comprising the steps of:

adjusting the hearing aid using both (1) measured and quantified loudness perception parameters of the individual weighted by a first factor and (2) normal loudness perception parameters weighted by a second factor; and

adjusting compression and/or amplification in the hearing aid, for which purpose the compression and, respectively, the amplification are each determined as a function of frequency, wherein

for determining the compression, the loudness perception of the individual is quantified by means of a LOHL factor which is determined by loudness scaling at a minimum of one frequency.

4. (previously presented) The method as in claim 3, wherein the LOHL factor is modeled using the equation:

$$\log_{10}(\alpha) = a_a \times HL + b_a \times \log(HL) + VP_{\text{consta}} \text{ where}$$

α = a gradient of the loudness function,

HL = a hearing loss in dB,

a_a , b_a = constant function parameters, and

VP_{consta} = an individual function parameter which adapts

the LOHL factor to data sampling points α_1 , α_2 ,
 α_3, \dots ,

and that VP_{consta} is determined on the basis of a
loudness scaling performed at a minimum of one
frequency.

5. (previously presented) A method for individualizing a
hearing aid in adaptation to a loudness perception of an
individual, said method comprising the steps of:

measuring and quantifying loudness perception parameters of
the individual, weighted by a first factor;
weighting of normal loudness perception parameters by a
second factor;

combining the weighted loudness perception parameters of the
individual with the weighted normal loudness perception
parameters to define a weighted loudness parameter; and
using the weighted loudness parameter for adjusting the
hearing aid, wherein

compression and/or amplification is/are adjusted in the
hearing aid, for which purpose the compression and,
respectively, the amplification are each determined as
a function of frequency, and wherein,

for determining the amplification, the loudness perception
of the individual is quantified by means of an HLL0
factor which is defined by loudness scaling at a
minimum of one frequency.

6. (previously presented) The method as in claim 5, wherein
the HLL0 factor is modeled using the equation:

$$L_0 = a_L \times HL + b_L \times \log(HL) + VP_{constL}, \text{ where}$$
$$L_0 = \text{a level of loudness} = 0,$$

HL = a hearing loss in dB,

a_L , b_L = a constant function parameters, and

VP_{constL} = an individual function parameter which adapts
the HLL0 function to the data sampling points L_{01} ,
 L_{02} , L_{03} , ...,

and that VP_{constL} is determined on the basis of a loudness scaling performed at a minimum of one frequency.

7. (previously presented) The method as in one of the claims 4 to 6 and 11, wherein the hearing loss is used for determining the frequencies at which loudness scaling is performed.

8. (previously presented) The method as in one of the claims 3 to 6 and 10 to 11, wherein the value of the weighted factors depends on the assumed and/or determined accuracy of the loudness scaling data.

9. (previously presented) The method as in claim 8, further comprising the selection of a value of 1/3 for the first factor and/or a value of 2/3 for the second factor.

10. (previously presented), A method for individualizing a hearing aid in adaptation to a loudness perception of an individual, said method comprising the steps of:

measuring and quantifying loudness perception parameters of
the individual, weighted by a first factor;

weighting of normal loudness perception parameters by a
second factor;

combining the weighted loudness perception parameters of the
individual with the weighted normal loudness perception
parameters to define a weighted loudness parameter; and

using the weighted loudness parameter for adjusting the hearing aid, wherein compression and/or amplification is/are adjusted in the hearing aid, for which purpose the compression and, respectively, the amplification are each determined as a function of frequency, and wherein, for determining the compression, the loudness perception of the individual is quantified by means of a LOHL factor which is determined by loudness scaling at a minimum of one frequency.

11. (previously presented) The method as in claim 10, wherein the LOHL factor is modeled using the equation:

$$\log_{10}(\alpha) = a_a \times HL + b_a \times \log(HL) + VP_{\text{consta}} \text{ where}$$

α = a gradient of the loudness function,

HL = a hearing loss in dB,

a_a , b_a = constant function parameters, and

VP_{consta} = an individual function parameter which adapts the

LOHL factor to data sampling points $\alpha_1, \alpha_2, \alpha_3, \dots$,

and that VP_{consta} is determined on the basis of a loudness scaling performed at a minimum of one frequency.

12. (previously presented) The method as in claim 1, further comprising the selection of a value of 2/3 for the first factor and/or a value of 1/3 for the second factor.

13. (previously presented) A method for individualizing a hearing aid in adaptation to a loudness perception of an individual, said method comprising the steps of:

measuring and quantifying loudness perception parameters of the individual, weighted by a first factor;

weighting of normal loudness perception parameters by a second factor;
combining the weighted loudness perception parameters of the individual with the weighted normal loudness perception parameters to define a weighted loudness parameter; and using the weighted loudness parameter for adjusting the hearing aid, wherein
compression and/or amplification is/are adjusted in the hearing aid, for which purpose the compression and, respectively, the amplification are each determined as a function of frequency, and wherein
for determining the amplification, the loudness perception of the individual is quantified by means of one of an HLL0 factor and an LOHL factor, which is defined by loudness scaling at a minimum of one frequency.